

LNF-LNC0.6_2A

0.6-2 GHz Cryogenic Low Noise Amplifier

Rev: May 2018



Absolute maximum ratings

Parameter	Min	Max
V_{ds}	-0.5 V	3 V
I_{ds}		100 mA
V_{gs}	-20 V	+20 V
RF Input drive level		-10 dBm
DC voltage on RF input and output	-30V	30V

Product features

- RF bandwidth: 0.6-2 GHz
- Noise Temperature: 1.0 K typical
- Noise Figure: 0.015 dB typical
- Gain: 31 dB
- DC-power: $V_d=0.6$ V, $I_d=20$ mA
- One gate and one drain supply only
- RF-connectors: female SMA
- DC-connector: 9-pin female Nano-D

Typical RF Characteristics

Parameter	Test Condition	Value	Unit
Gain	0.6-2 GHz	31	dB
Noise	0.6-2 GHz	1.0	K
IRL	0.6-2 GHz	10	dB
ORL	0.6-2 GHz	15	dB

Product description

LNF-LNC0.6_2A is an ultra-low noise cryogenic amplifier operating in the 0.6-2 GHz frequency range. The LNA is packaged in a coaxial module using industry standard SMA and Nano-D connectors. The lightweight gold plated aluminum module measures 35.5*19.8*7.80 mm excluding the connectors.

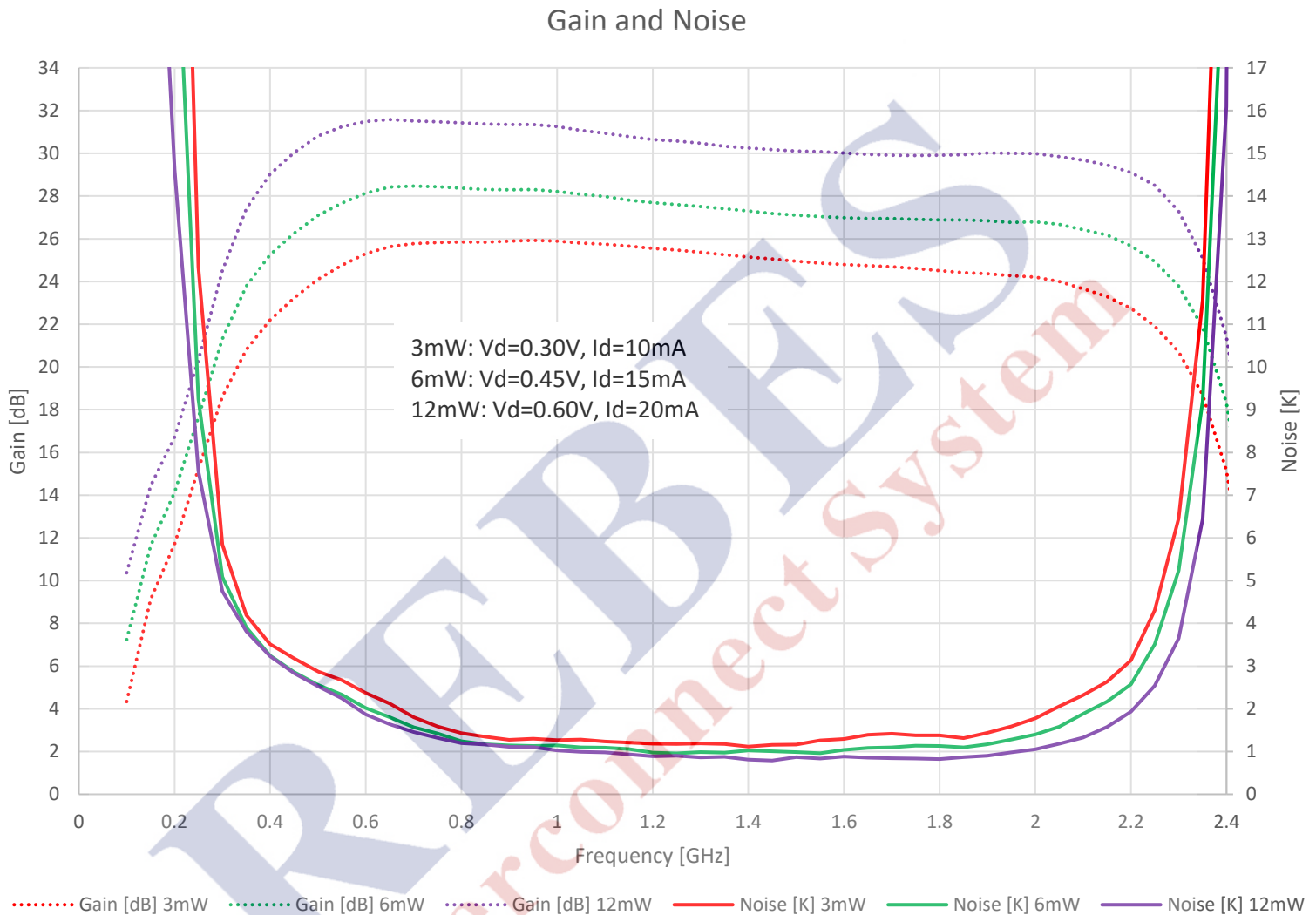
Typical DC Characteristics

Parameter	Value	Unit
V_{ds}	0.6	V
I_{ds}	20	mA
V_{gs}	-0.20	V
I_{gs}	20	μ A
P_{dc}	12	mW

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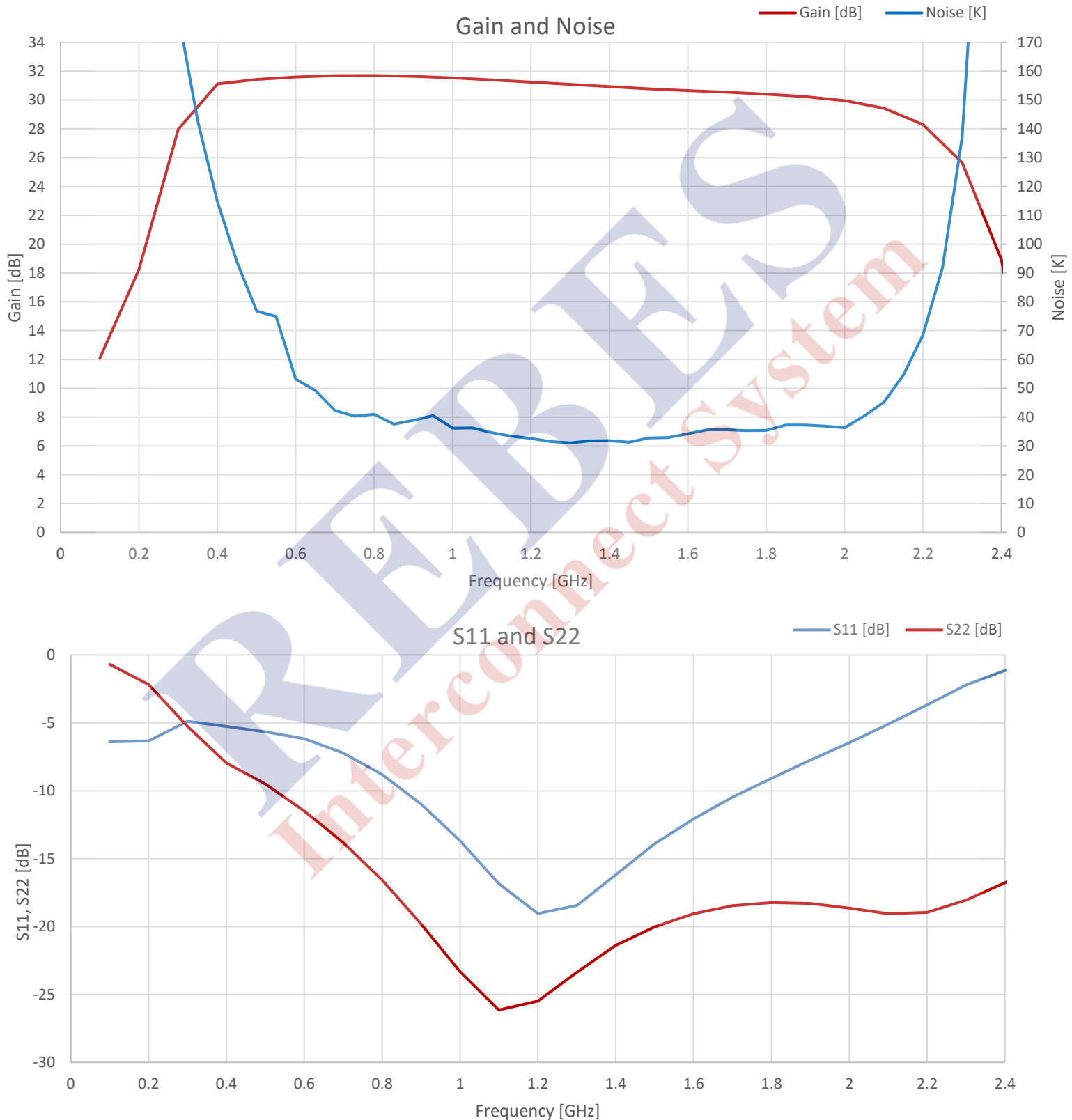
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Measured typical data $T_{amb}=4\text{ K}$ 

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Measured typical data @ $T_{amb}=296\text{ K}$ 

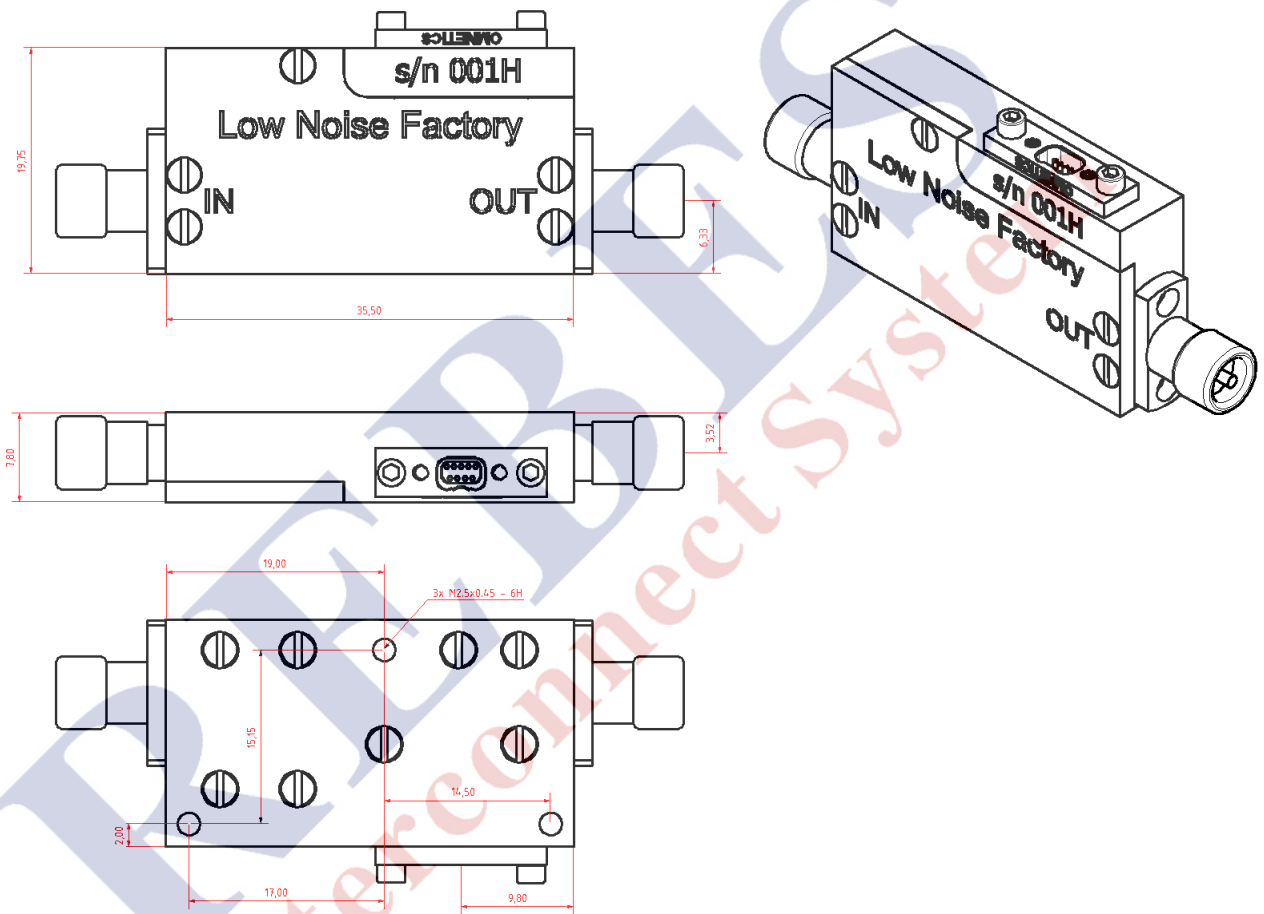
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Drawings



Dimensions are in millimeters